

210

“Invincible” Vacuum-Cleaners

Descriptive

Both Portable and Stationary Models

W. & J. SLOANE

FIFTH AVENUE & 47TH ST., NEW YORK

TELEPHONE: 7700 MURRAY HILL

WASHINGTON, D.C., 1412-1414 H St., N.W.

"Invincible" VACUUM CLEANERS

"Invincible"

STATIONARY OR PORTABLE VACUUM-CLEANERS
HAVE BEEN SOLD TO THE FOLLOWING

RESIDENCES

NICHOLAS F. BRADY 989 Fifth Ave.
IRVING T. BUSH 28 East 64th St.
ANDREW CARNEGIE 2 East 91st St.
ANDREW CARNEGIE (garage) 55 East 90th St.
ANDREW CARNEGIE Skibo Castle, Scotland
A. S. COCHRAN 10 East 41st St.
CHARLES T. CROCKER San Mateo, Cal.
R. FULTON CUTTING 24 East 67th St.
JAMES MAY DUANE 109 East 65th St.
W. B. OSGOOD FIELD 645 Fifth Ave.
W. B. OSGOOD FIELD Lenox, Mass.
JAY GOULD 1082 Fifth Ave.
GEORGE GOULD Lakewood, N. J.
GEORGE GOULD Yacht "Atalanta"
WILLIAM GUGGENHEIM 833 Fifth Ave.
H. O. HAVEMEYER, JR. Mahwah, N. J.
RAYMOND HOAGLAND 817 Fifth Ave.
ALVIN E. IVIE 117 8th Ave. Bklyn.
MRS. WM. P. JENKS Morristown, N. J.
WALTER JENNINGS 43 West 56th St.
WALTER JENNINGS Cold Spring, L. I.
MRS. MORRIS K. JESUP 297 Madison Ave.
MRS. HOWARD LAPSLEY 104 East 65th St.
FRANCIS G. LLOYD 157 East 71st St.
COL. JOHN McANERNEY 20 West 49th St.
GEORGE G. McMURTRY 812 Fifth Avenue
JOSEPH MILBANK 27 East 39th St.
J. PIERPONT MORGAN Glen Cove, L. I.
SCHUYLER L. PARSONS Islip, L. I.
E. A. NUTTING 16 Prospect Park W.,
Brooklyn

RESIDENCES

COL. OLIVER H. PAYNE West Park, N. Y.
A. PAGENSTECHEER 52 West 40th St.
CHARLES PEABODY 224 Madison Ave.
F. S. PEARSON Gt. Barrington, Mass.
F. F. PALMER Port Chester, N. Y.
G. Q. PALMER Port Chester, N. Y.
N. F. PALMER Port Chester, N. Y.
N. F. PALMER 922 Fifth Ave.
F. B. PRATT Glen Cove, L. I.
JOHN T. PRATT 11 East 61st St.
JOHN T. PRATT Glen Cove, L. I.
GEORGE D. PRATT Glen Cove, L. I.
MRS. WHITELAW REID 451 Madison Ave.
JOHN D. ROCKEFELLER 4 West 54th St.
THOMAS F. RYAN 858 Fifth Ave.
MRS. T. F. RYAN Suffern, N. Y.
WILLIAM SALAMON 1020 Fifth Ave.
WM. JAY SCHIEFFELIN 5 East 66th St.
LORENZO SEMPLÉ Mt. Kisco, N. Y.
HIRAM W. SIBLEY 105 East 71st St.
HIRAM W. SIBLEY Rochester, N. Y.
WM. D. SLOANE 2 West 52d St.
THOMAS SMIDT 134-5 East 39th St.
JAMES SPEYER 87th St. & 5th Ave.
JAMES SPEYER Scarborough, N. Y.
MRS. CORNELIUS VANDERBILT 1 W 57th St.
WM. K. VANDERBILT 660 Fifth Ave.
PAUL M. WARBURG Hartsdale, N. Y.
HARRY PAYNE WHITNEY Westbury, L. I.
ORME WILSON, JR. 11 East 64th St.

OFFICE BUILDINGS and STORES

AMERICAN WOOLEN Co. 18th St. & 4th Ave.
ARCHITECTS' BUILDING 101 Park Ave.
BANK OF COMMERCE BLDG. 31 Nassau St.
COTTON EXCHANGE BLDG. 60 Beaver St.
B'KLYN EDISON Co.'s BLDG. Brooklyn, N. Y.
FRANKLIN TRUST Co. BLDG. Brooklyn, N. Y.
FIFTH AVE. BANK BLDG. 530 Fifth Ave.
LANGDON BUILDING 309 Broadway
LIBERTY TOWER BLDG. 55 Liberty St.
MUTUAL LIFE INS. Co. BLDG. 45 Cedar St.
GRAND CENTRAL PALACE 46th St. & Lex. Ave.
POSTAL LIFE INS. Co. BLDG. 35 Nassau St.
SEAMAN'S CHURCH INST. BLDG. 25 South St.
STOCK QUOTATION TEL. BLDG. 26 Beaver St.
SPRINGS BUILDING 29 West 38th St.
UNDERWRITERS BUILDING 123 William St.
PRATT INSTITUTE Brooklyn, N. Y.
A. A. VANTINE & Co. 39th St. & 5th Ave.
L. ALAVOINE & Co. 712 Fifth Ave.
B. ALTMAN & Co. 35th St. & 5th Ave.
AITKEN, SON & Co. 438 Fifth Ave.
WM. BAUMGARTEN & Co. 715 Fifth Ave.
BROOKS BROTHERS 22d St. & Broadway
E. P. DUTTON & Co. 681 Fifth Ave.
PETER HENDERSON & Co. 35 Cortlandt St.
GEO. C. FLINT & Co. 43 W. 23d St.
W. & J. SLOANE 575 Fifth Ave.
DEERING, MILLIKEN & Co. 79 Leonard St.

CHURCHES and HOSPITALS

CATHEDRAL, ST. JOHN, DIVINE 110th St. & Amst. Av.
ST. PATRICK'S CATHEDRAL 50th St. & 5th Ave.
TRINITY CHURCH Wall St. & Broadway
ST. AGNES' CHAPEL 121 W. 91st St.
PAULIST'S FATHERS' CHURCH 59th St. & Col. Ave.
BRICK PRESB. CHURCH 5th Ave. & 37th St.
MAD. AV. PRESB. CHURCH 73d St. & Mad. Ave.
MAD. SQ. PRESB. CHURCH 24th St. & Mad. Ave.
ST. MARK'S CHURCH 10th St. & 2d Ave.
MANHATTAN STATE HOSPITAL Wards Island, N. Y.
KINGS PARK STATE HOSPITAL Kings Park, N. Y.
WOMAN'S HOSPITAL 141 W. 109th St.
ROCKEFELLER INSTITUTE 66th St. & Ave. A.
MOUNT SINAI HOSPITAL 100th St. & 5th Ave.

CLUBS and HOTELS

CENTURY CLUB 7 West 43d St.
COLONY CLUB 122 Madison Ave.
UNION LEAGUE CLUB 1 East 39th St.
UNIVERSITY CLUB 1 West 54th St.
METROPOLITAN CLUB 1 East 60th St.
RACQUET & TENNIS CLUB 27 West 43d St.
N. Y. ATHLETIC CLUB 58 W. 59th St.
WOMAN'S UNIVERSITY 99 Madison Ave.
TUXEDO CLUB Tuxedo Park, N. Y.
PIPING ROCK CLUB Locust Valley, L. I.
MERCHANTS' CLUB 346 Broadway
ANSONIA HOTEL 73d St. & Broadway
HOTEL ASTOR Times Square
BUCKINGHAM HOTEL 50th St. & 5th Ave.
MANHATTAN HOTEL 42d St. & Mad. Ave.
LORRAINE HOTEL 2 East 45th St.
MURRAY HILL HOTEL 41st St. & Park Ave.
PRINCE GEORGE HOTEL 14 East 28th St.
PARK AVENUE HOTEL 33d St. & Park Ave.
GRAND UNION HOTEL 42d St. & Park Ave.
CHELSEA HOTEL 222 West 23d St.
MARTHA WASHINGTON HOTEL 29 East 29th St.
THE BERESFORD 1 West 81st St.
THE CHATSWORTH 346 W. 72d St.
ROYAL POINCIANA Palm Beach, Fla.
THE BREAKERS Palm Beach, Fla.
HOMESTEAD HOTEL Hot Springs, Va.
MARLBOROUGH-BLENHEIM Atlantic City, N. J.

STEAMSHIP COMPANIES and FACTORIES

CLYDE S. S. Co. Pier 36, N. R.
HUDSON NAV. Co. Pier 32, N. R.
MALLORY S. S. Co. Pier 37, N. R.
OELRICHS & Co. 5 Broadway
SOUTHERN PACIFIC Co. Pier 48, N. R.
UNITED FRUIT Co. 17 Battery Pl.
WM. BAUMGARTEN & Co. 227 East 44th St.
DEFENDER MFG. Co. 214 Avenue C.
DOMINICK & HAFF 543 West 23d St.
AMERICAN THREAD Co. Willimantic, Conn.
PENNSYLVANIA TEXTILE Co. York, Penna.
SUTRO BROS. BRAID Co. West N. Y., N. J.
STANDARD MAIL ORDER Co. 425 West 55th St.
S. S. WHITE DENTAL MFG. Co. Princes Bay, S. I.

Let us send you a list of those in your locality

W. & J. SLOANE, FIFTH AVE. & 47TH STREET, NEW YORK

TELEPHONE: 7700 MURRAY HILL

9965

WASHINGTON, D. C., 1412-1414 H. STREET, N. W.

"Invincible" VACUUM CLEANERS

SPECIFICATIONS FOR "Invincible" NUMBER FIFTEEN



"Invincible" Number Fifteen
Price, with Standard Equipment, \$95

Exhauster:—"Invincible" two-stage turbo fan operating at 3500 r. p. m. giving a suction of 12½" under normal conditions. Passes from 20 to 75 feet of air per minute according to conditions.

Motor:—One-fourth horse-power Westinghouse AC or DC 110 or 220 volt to suit current conditions. Motor shaft is vertical, and is provided with well oiled sleeve bearings. Starts on 10 ampere fuse. Alternating current machines are furnished for 60 cycles only.

Dust Bag:—Regular "Invincible" cloth sack, easily removable by simply lifting from the dust collector.

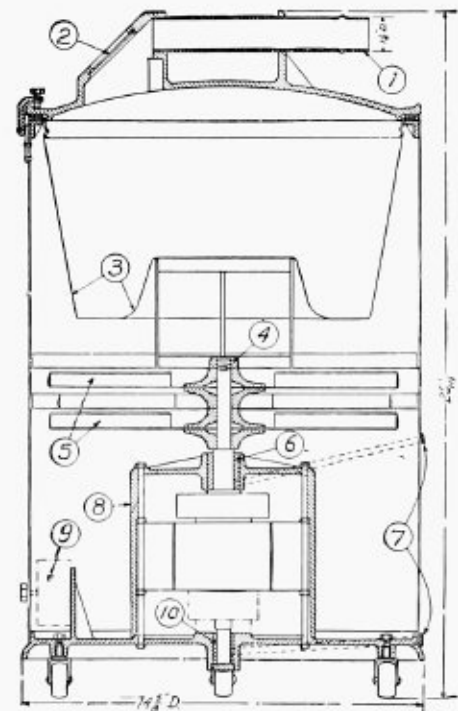
Equipment:—25 ft. of flexible cord with Edison attachment plug, 12 ft. 1¼" canvas covered suction hose, 1-1¼" bent floor rod with swivel, 1-10" carpet renovator, 1-10" bare floor attachment, 1-3" upholstery and drapery tool, and 1 thorough renovating carpet tool.

Weight:—43 pounds.

The "Invincible" Fifteen is a favorite for household work. It has a sheet metal casing, aluminum frame, cover and handles, assuring light weight; is easily moved about, and has a powerful motor and exhauster of sufficient capacity to insure thorough cleaning.

The only wearing parts are the two bearings which run in an oil bath.

This machine has more power than any other machine of like size and price. Its efficiency and economy have been thoroughly demonstrated in many homes.



SECTIONAL DIAGRAM

NAME OF PARTS

- | | |
|---------------------|------------------|
| 1—Hose-connection | 6—Upper-bearing |
| 2—Observation-glass | 7—Oil-holes |
| 3—Dust-bag | 8—Motor-frame |
| 4—Left hand fan-nut | 9—Motor-switch |
| 5—Fans | 10—Lower-bearing |

W. & J. SLOANE, FIFTH AVE. & 47th STREET, NEW YORK

TELEPHONE: 7700 MURRAY HILL

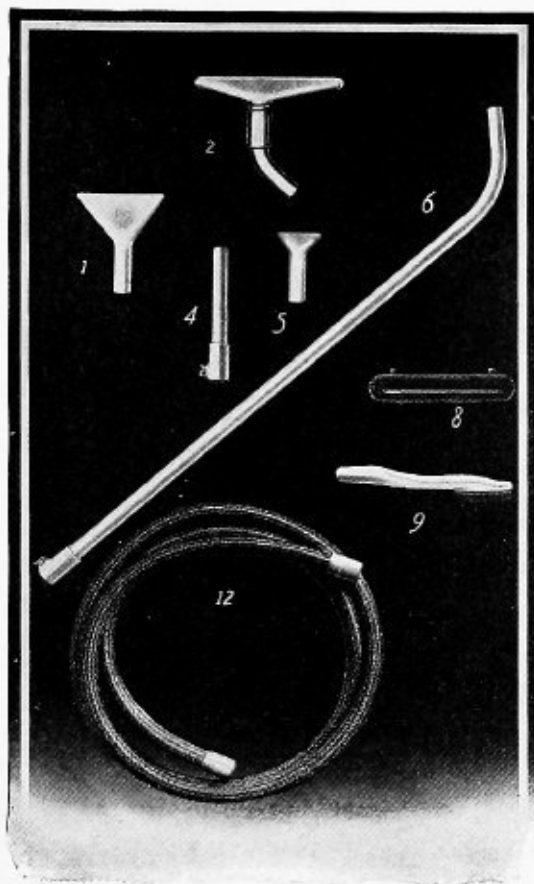
WASHINGTON, D. C., 1412-1414 H. STREET, N. W.

PRICE BULLETIN OF ACCESSORY EQUIPMENT FOR

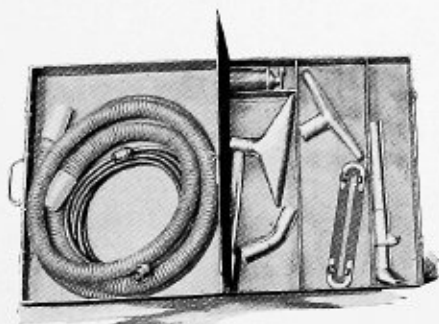
"Invincible"

VACUUM-CLEANERS

WITH SUGGESTIONS RELATIVE TO INSPECTION AND REPAIRS



Equipment Carrying Case
Ready for Carrying



Equipment Carrying Case
Showing Inside Arrangement

ALUMINUM RODS

		Cat. No.	Price
Figure 6	Bent Floor Rod, 1 1/4" x 52"	120/5	\$2.50
	Same, but bushed for 1 1/2" hose	120/6	2.90
	Bent Floor Rod, 1 1/2" x 52" (like figure 6)	120/12	4.25
	Straight Wall Rod, 1 1/4" x 58"	120/9	2.50
	Same, but bushed for 1 1/2" hose	120/10	2.90
	Straight Wall Rod, 1 1/2" x 58"	120/13	4.25
	Bushing for connecting 1 1/4" rods	157	.65
	Bushing for connecting 1 1/2" rods	241	.75
Figure 4	Hand Rod, 1 1/4" x 9"	120/1	1.50
	Same, but bushed for 1 1/2" hose	120/3	1.90

HOSE AND HOSE ACCESSORIES

	Hose, 10 ft. length, for Baby Model Suction Sweeper		2.00
Figure 12	Hose, 1 1/4" or 1 1/2", light weight, per ft.		.35
	Hose, 1 1/4" or 1 1/2" (like figure 12) medium or heavy weight, per ft.		.50
	Stock lengths: 12 ft., 15 ft., 25 ft.		
	Special Grade Hose	Price on application	
	Hose Coupling, 1 1/4" sleeve type		.30
	Hose Coupling, 1 1/2" sleeve type		.50
	Valve Connector, 1 1/4", cat. no. 250, or 1 1/2", cat. no. 300		.45

RENOVATORS AND ATTACHMENTS

		Cat. No.	Price
Figure 2	10" Carpet Renovator, 1 1/4" swivel type, fits No. 166	170	\$2.00
	Same, but for 1 1/2" swivel, fits No. 196	220	2.00
	10" Carpet Renovator, 1 1/4" narrow slot, fits No. 166	236	2.00
	Same, but for 1 1/2" swivel, fits No. 196	539	2.00
Figure 2	12" Carpet Renovator, 1 1/4" swivel type, fits No. 166	165	2.75
	Same, but for 1 1/2" swivel, fits No. 196	195	2.75
	As above, but cast iron, fits No. 196	265	3.00
Figure 8	10" Bare Floor Felt Attachment, fits Nos. 170 and 220	110/8	2.25
	Same, but without clamps and screws		1.55
Figure 8	12" Bare Floor Felt Attachment, fits Nos. 165 and 195	112/5	2.75
	Same, but without clamps and screws		2.05
	16" Bare Floor Renovator, 1 1/2" swivel type, complete	112/7	7.00
	16" Replaceable Felt Face for the above	209	3.00
Figure 2	Swivel Joint, complete, 1 1/4"	166	1.50
	Swivel Joint, 1 1/2" (springless)	196-A	2.00
	Hose Swivel, 1 1/2" hose, fits 1 1/4" No. 120/5 Rod	115/19	3.50
	Hose Swivel, 1 1/2" hose, fits 1 1/2" No. 120/12 Rod	115/5	3.50
	Hose Swivels, either the above, if provided with cut-off, additional		1.50

<i>Renovators and Attachments, continued.</i>		<i>Cat. No.</i>	<i>Price</i>
Figure 5	3" Upholstery and Drapery Tool, fits 9" hand rod	114	1.00
	Same, but one piece, for 1 $\frac{1}{4}$ " hose.	136	1.35
	As above, but bushed for 1 $\frac{1}{2}$ " hose.	136-242	1.75
Figure 5	5" Upholstery and Drapery Tool, fits 9" hand rod	115	1.50
	Same, but one piece, for 1 $\frac{1}{4}$ " hose.	169	1.85
	As above, but bushed for 1 $\frac{1}{2}$ " hose.	169-242	2.25
Figure 1	7 $\frac{3}{4}$ " Deep Rug Tool, 1 $\frac{1}{4}$ "	614	2.00
	Same, but having wide cleaning face.	117	2.75
	7 $\frac{3}{4}$ " Deep Rug Tool, 1 $\frac{1}{2}$ "	214	2.00
	9" Blower Tool, fits either 1 $\frac{1}{4}$ " or 1 $\frac{1}{2}$ " hose	133	.75
	18" Blower Tool, fits either 1 $\frac{1}{4}$ " or 1 $\frac{1}{2}$ " hose	132	1.25
	Corner and Crevice Tool 1 $\frac{1}{4}$ "	118/14	2.25
	Same, bushed for 1 $\frac{1}{2}$ " hose.	118/15	2.65
	Pillow Tool, 1 $\frac{1}{4}$ "	75-76	3.50

BRISTLE BRUSHES

Figure 8	10" Bristle Attachment, fits Nos. 170 and 220	110/7	*2.25
	10" Replaceable Bristle Face for the above		*1.50
Figure 8	12" Bristle Attachment, fits Nos. 165 and 195	112/4	*2.50
	12" Replaceable Bristle Face for the above		*1.75
	16" Bristle Renovator, 1 $\frac{1}{2}$ " swivel type complete	114/7	*6.50
	16" Replaceable Bristle Face for the above		*2.50
	Furniture Brush, 2"x6 $\frac{1}{2}$ " face, 1 $\frac{1}{4}$ "	114/5	*2.50
	Same, but for 1 $\frac{1}{2}$ " hose.	114/3	*2.50
	Replaceable Bristle for the above.	263	*1.10
Figure 9	Book Brush, flat, oval opening, 1 $\frac{1}{4}$ "	110/2	*2.75
	Same, but for 1 $\frac{1}{2}$ " hose.	110/3	*2.75
	Replaceable Bristle for the above.	1159	*1.00
	Clothes Brush, 1 $\frac{1}{4}$ ", 2 $\frac{1}{2}$ "x4" oval face.	112/6	2.75
	Replaceable Bristle for the above.	288	1.60
	Stucco Brush, 1 $\frac{1}{4}$ ", circular face, 4" diameter	110/10	*5.50
	Same, but for 1 $\frac{1}{2}$ " hose.	110/11	*5.50
	Replacement Bristle for the above, long hair.	110	*1.25
	*For Stiff Bristles, add.25

SPECIAL TOOLS

Additional to the above we can furnish on special order, tools and attachments designed for distinctive purposes, among which are Library Brushes, Curry-combs, Horse Brushes, etc.

OIL AND LUBRICANTS

Machine Oil in half-pint spout cans, each.15
Machine Oil in half-pint spout cans, by mail, each.25
Machine Oil in one-gallon cans, gal.90
<i>Extra charge for boxing if sent by express.</i>	

ACCESSORIES

Equipment Carrying Case, 17"x21"x7" (<i>see illustration</i>)	7.00
Carriage for 2-Stage Junior, 16" wheels (<i>see illustration</i>)	9.50
Canvas Cover for No. 15 or Junior Models.	4.00
Canvas Cover for Truck Model Cleaners.	6.50

REPLACEMENT PARTS

	<i>Price</i>
Carbon Motor Brushes	
For Baby Model, 1/10 h.p. Peerless Motor, per pair.....	.24
Springs for the above, per pair.....	.10
For No. 15 Model {	
2-Stage Junior } 1/4 h.p. Westinghouse Motor, per pair36
For 3-Stage Junior or Junior-Truck, 1/3 h.p. Westinghouse Motor, per pair.....	.60
Springs for the above, per pair.....	.20
For Commercial Model {	
Domestic Model } 1/2 h.p. General Electric Motor, per pair80
For Truck Model, 1 h.p., 110-volt Westinghouse Motor, per pair60
For Truck Model, 1 h.p., 220-volt Westinghouse Motor, per pair50
For Truck Model, 1 h.p., 110-volt General Electric Motor, per set (4).....	1.60

Parts for all models can be obtained. Prices on application.

INLET VALVES AND FITTINGS

	<i>Cat. No.</i>	<i>Price</i>
Flush Types, polished (hardware) bronze		
Non-lock, one piece, 2" male thread.....	103/2	2.00
Lock, one piece, 2" male thread.....	103/1	2.50
Non-lock, two piece, combination 2" male and 1 1/2" female thread	100/1	2.00
Non-lock, two piece, 2" female thread.....	100/2	2.00
Fittings		
2" Extension Piece, 1 5/8" extension.....	261	.25
2" Coupling, female, 1 1/2" long.....	219	.25
2"x1 1/2" Reducing Coupling, 1 1/2" long.....	222	.25
Exposed Types, polished aluminum, except 105/1		
Non-lock, 2" female thread	101/1	2.00
Non-lock, 2" male thread	101/2	2.00
Non-lock, 1 1/2" female thread	101/5	2.00
Lock, 1 1/2" male thread, polished bronze.....	105/1	2.50

Note: For bronze or brass finishes other than standard, add per valve..... .50

Prices subject to change without notice.

INSPECTION

Many users of "Invincible" Vacuum Cleaners, and especially Theatres, Stores, Banks and Public Institutions, find our Inspection Service invaluable to them. By inspecting machines periodically, carelessness and misuse may be eliminated and trouble is anticipated and prevented.

By having machine in first class operating condition at all times it can be relied upon to give maximum efficiency. This in itself will save many times the cost of the Service, to say nothing of the time that operators might lose should machine become troublesome, or the heavy repair expense occasioned by lack of timely attention.

REPAIRING

We are completely equipped for Repairing "Invincible" Vacuum Cleaners. These are our specialty. A postal, letter or telephone call will bring our mechanic promptly.

Usually repairs can be effected on customer's premises. For extensive repairs our shop is fully equipped and by the use of our Trunk System the safe and easy transportation of No. 15 and Junior Model Machines is facilitated.

Our familiarity with the construction of "Invincible" Cleaners and our ready stock of parts are essential to proper Repairing. As it is to our interest to maintain the excellent reputation of "Invincible" Vacuum Cleaners we naturally aim to keep Repair expense low.

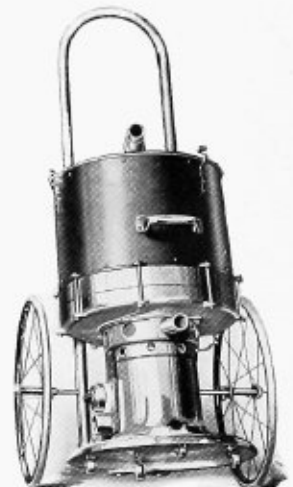
W. & J. SLOANE,

FIFTH AVENUE & 47TH STREET,

NEW YORK

TELEPHONE: 7700 MURRAY HILL

WASHINGTON, D. C., 1412-1414 H. STREET, N. W.



Carriage for 2-Stage Junior
Showing Application

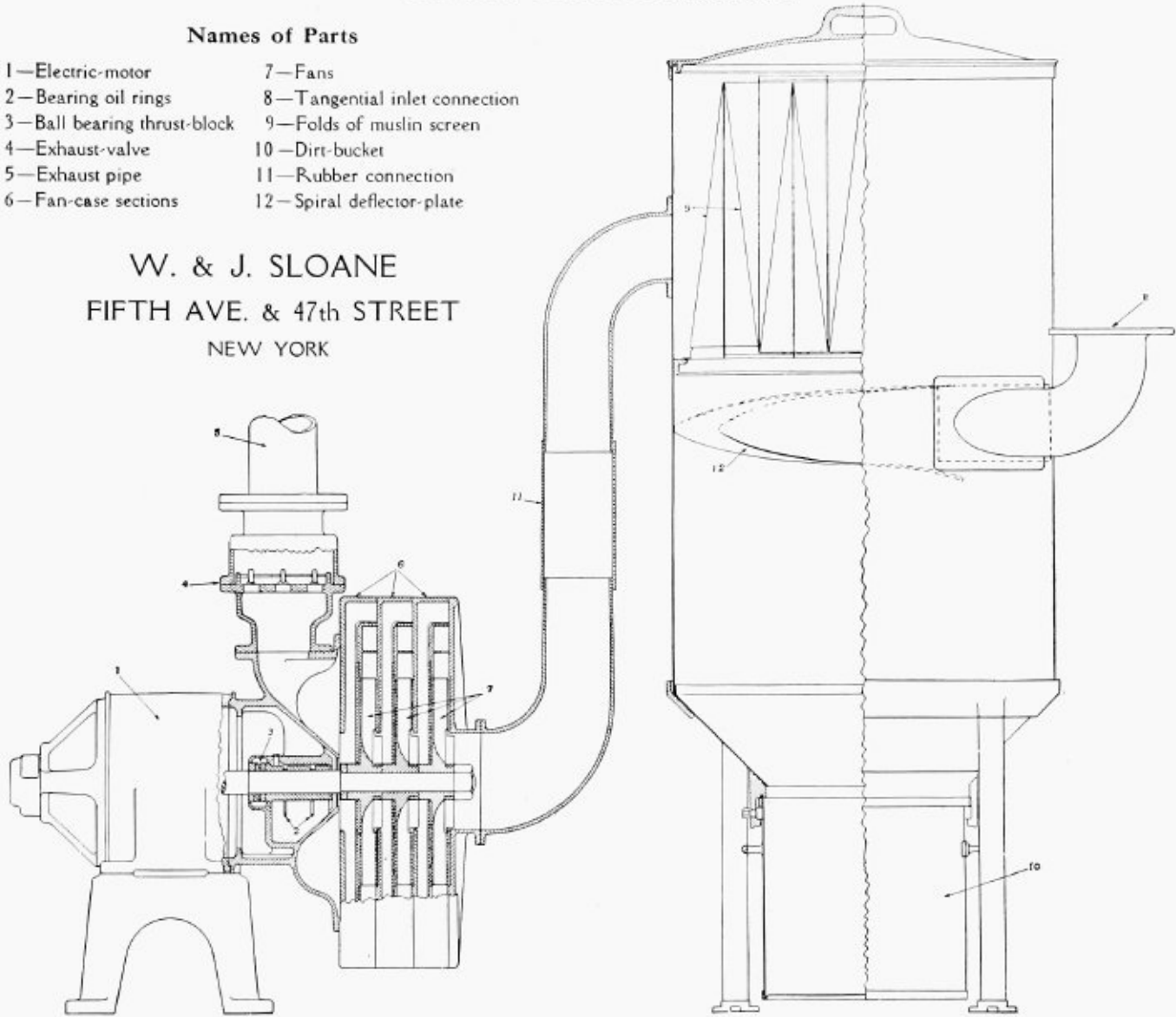
"Invincible" VACUUM CLEANERS

SECTIONAL DIAGRAM SHOWING CONSTRUCTION OF TURBINE AND CENTRIFUGAL SEPARATOR.

Names of Parts

- | | |
|-----------------------------|-------------------------------|
| 1—Electric-motor | 7—Fans |
| 2—Bearing oil rings | 8—Tangential inlet connection |
| 3—Ball bearing thrust-block | 9—Folds of muslin screen |
| 4—Exhaust-valve | 10—Dirt-bucket |
| 5—Exhaust pipe | 11—Rubber connection |
| 6—Fan-case sections | 12—Spiral deflector-plate |

W. & J. SLOANE
FIFTH AVE. & 47th STREET
NEW YORK

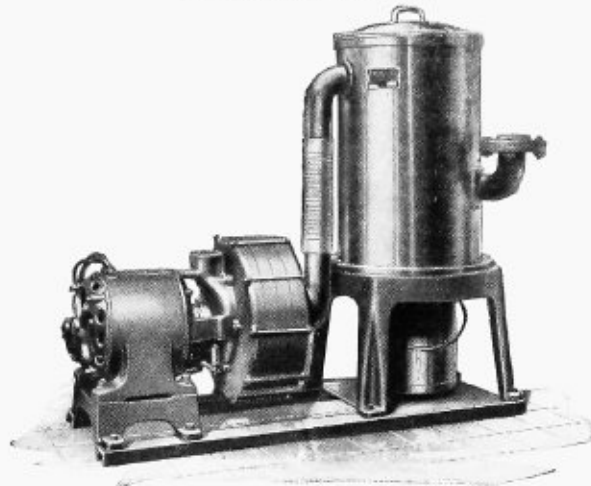


Plant No.	Number of Sweepers in Simultaneous use	Horse Power	Maximum Floor Space	Height for Clearance	SIZES OF PIPING			Normal Rated Capacity	
					Risers	Laterals	Exhaust	Cubic Feet Air Per Minute	Vacuum (inches water) at machine for rated air Capacity
405	1	½	18" x 26"	26"	★2" - 2½"	2½"	2½"	50	18"
410	1	1	18" x 43"	26"	★2" - 2½"	2"-2½"	2½"	60	26"
415	1	1¼ DC 1½ AC	18" x 44"	26"	★2" - 2½"	2½"	2½"	60	35"
705	1	½	23" x 37"	43½"	2" - 2½"	2½"	2½"	50	18"
710	1	1	23" x 44"	43½"	2" - 2½"	2½"	2½"	60	26"
715	1	1¼ DC 1½ AC	23" x 46½"	43½"	2" - 2½"	2½"	2½"	60	35"
802	2	2	60" x 30"	85"	2" - 2½"	2½"-3"	3"	160	32"-34"
803	2	3	65" x 30"	85"	2" - 2½"	2½"-3"	3"	160	47"-51"
804	3	4	65" x 30"	85"	2" - 2½"	2½"-3"	3"	240	42"-45"
905	4	5	85" x 40"	100"	2"-2½"-3"	2½"-5"	5"	260	50"-52"
907	4	7½	100" x 40"	100"	2"-2½"-3"	2½"-5"	5"	320	64"-66"
910	5 or 6	10	100" x 40"	100"	2"-2½"-3"	2½"-5"	5"	460	64"-66"
911	4	10	100" x 40"	100"	2"-2½"-3"	2½"-5"	5"	350	80"-84"
915	6	15	100" x 40"	100"	2"-2½"-3"	2½"-5"	5"	480	70"-75"

★ If 2", put 2" x 2½" Long Sweep Elbow at foot of Riser.

"Invincible" VACUUM CLEANERS

SINGLE-SWEEPER STATIONARY PLANTS (Centrifugal Separator)



Typical single sweeper stationary plant with centrifugal separator.
(Plants Nos. 705, 710 and 715)

In capacity and efficiency these plants are identical with standard single sweeper plants Nos. 405, 410 and 415. Motor and separator are mounted upon a channel iron base, making a self-contained unit which can be easily placed in position without the necessity of aligning separate parts. Exhauster and separator tank are connected by means of a rubber coupling.

Dust Collector: "Invincible" centrifugal separator, insuring perfect separation. Dirt-laden air enters tank at a tangent, the heavier particles being thrown to the bottom of the tank where they are caught in the dust bucket. Over 95% of the dirt is taken care of in this manner; the remainder, consisting of very fine dust particles, is caught upon a screen placed in the upper part of the tank. Screen is self cleaning. Tank: heavy sheet steel shell; top and stand, cast iron. Dust bucket of heavy sheet steel with reinforced bottom, suspended from ears on tank shell and is locked in position, air tight, by the simple operation of pressing down the handle.

Equipment: None included in the price, but the following is suggested as sufficient for all ordinary needs, viz: 25 ft. of 1½" canvas covered wire reinforced suction hose; 1-12" carpet renovator; 1-10" narrow slot swivel type carpet renovator for thorough cleaning; 1-1¼" curved handle fitted for 1½" hose, with tool swivel; 1-3" upholstery renovator; 1-12" brush for floor or walls; and one general utility brush.

SPECIFICATIONS SINGLE-SWEEPER STATIONARY PLANTS WITH CENTRIFUGAL SEPARATOR

No. 705

Exhauster:—"Invincible" two-stage fan (aluminum) mounted directly upon motor shaft. Fan cases (soft gray cast iron) bolted to motor frame.

Motor:—One-half H. P., 3500 r. p. m. Westinghouse or General Electric. Can be furnished for D. C. 110 or 220 volts, and A. C. 110 or 220 volts, 60 cy., single phase. Two ring-oiled bearings (only points of friction). Snap switch on motor frame.

***Capacity:**—Will maintain a vacuum of 18" at machine while displacing 50 cu. ft. atmospheric air per minute. Maximum suction, 26"; maximum displacement, 110 cu. ft. per minute.

Piping:—Suction, 2" or 2½" (tank connection for riser tapped for 2½" pipe); exhaust, 2½".

Weight:—Crated, 500 pounds.

Dimensions (overall) — Width, 23"; length, 37"; height, 43½".

No. 710

Exhauster:—"Invincible" three-stage fan (aluminum) mounted directly upon motor shaft. Fan cases (soft gray cast iron) bolted to motor frame.

Motor:—1 H. P., 3500 r. p. m., General Electric or Century Electric. Can be furnished for D. C. 110 or 220 volts, and A. C. 110 or 220 volts, 60 cycles, single phase. Two ring-oiled bearings (only points of friction). Fused knife switch, for wall mounting.

***Capacity:**—Will maintain a vacuum of 26" at machine while displacing 60 cu. ft. atmospheric air per minute. Maximum suction, 33"; maximum displacement, 115 cu. ft. per minute.

Piping:—Suction, 2" or 2½", (tank connection for riser tapped for 2½" pipe); exhaust, 2½".

Weight:—Crated, 600 pounds.

Dimensions (overall) — Width, 23"; length, 44"; height, 43½".

No. 715

Exhauster:—"Invincible" four-stage fan (aluminum) mounted directly upon motor shaft. Fan cases (soft gray cast iron) bolted to motor frame.

Motor:—1½ H. P., A. C.; 1¼ H. P., D. C., 3500 r. p. m. Westinghouse, General Electric or Century. Can be furnished for D. C. 110 or 220 volts, and A. C. 110 or 220 volts, 60 cycles, single, two and three phase. Two ring-oiled bearings, (only points of friction). Fused knife switch, for wall mounting. Starting rheostat also for D. C.

***Capacity:**—Will maintain a vacuum of 35" at machine while displacing 60 cu. ft. atmospheric air per minute. Maximum suction, 40"; maximum displacement, 130 cu. ft. per minute.

Piping:—Suction, 2" or 2½", (tank connection for riser tapped for 2½" pipe); exhaust, 2½".

Weight:—Crated, 650 pounds.

Dimensions (overall) — Width, 23"; length, 46½"; height, 43½".

*These measurements made by the orifice method; water gauge.

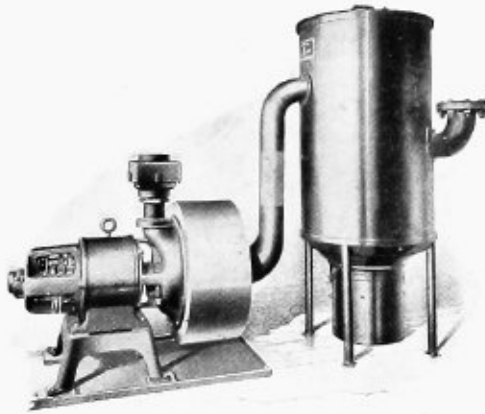
W. & J. SLOANE, FIFTH AVE. & 47th STREET, NEW YORK

TELEPHONE: 7700 MURRAY HILL

WASHINGTON, D. C., 1412-1414 H. STREET, N. W.

"Invincible" VACUUM CLEANERS

"Invincible" STATIONARY PLANTS



Typical Five and Six Sweeper
Stationary Plants
(Nos. 910 and 915)

A good vacuum cleaning plant is not an expense, but a wise investment. The best pays the biggest dividends. The "Invincible" is built to give a lifetime of service. Correct design, the best materials and good workmanship insure durability and economy in operating cost. The manufacturers of the "Invincible" were the first to employ the centrifugal fan principle for vacuum cleaning and they only have perfected its application to this service.

Fans: The fans are of aluminum and are mounted directly upon one end of the motor shaft. Only two ring oiled bearings are used to support the moving element, which consists of fans and revolving part of motor. This reduces wearing parts to a minimum and gives the maximum of simplicity and durability.

Dust Collector: "Invincible" combined centrifugal and screen type. Consists of heavy sheet steel shell, welded, with cast iron top and base. Tank mounted on three legs so that it can be made to stand level without any trouble.

Separator tank and exhauster are shipped as separate units; connected by rubber coupling so they can easily be aligned and set.

SPECIFICATIONS "Invincible" FIVE AND SIX SWEEPER STATIONARY PLANTS

No. 910

Exhauster: "Invincible" three-stage turbo fan (aluminum). Fan cases (soft gray iron castings) bolted to motor frame.

Motor: 10 H. P., 3500 r.p.m. General Electric. Can be furnished for D. C. 110 or 220 v. and A. C. 110 or 220 v. 60 cy. two or three phase. Two ring oiled sleeve bearings and ball thrust collar (only points of friction). Fused knife switch for wall mounting, with hand starter for A. C. or rheostat for D. C.

***Capacity:** Light duty five or six sweeper. Will maintain at machine a vacuum of 64" to 66" while displacing 460 cu. ft. atmospheric air per minute.

Equipment: Extra.

Dimensions: Maximum floor space 100" x 40". Height for clearance 100".

Weight: Crated 2500 lbs.

Piping: Risers 2", 2½" and 3"; laterals 2½" to 5"; exhaust 5".

No. 915

Exhauster: "Invincible" three-stage turbo fan (aluminum). Fan cases (soft gray iron castings) bolted to motor frame.

Motor: 15 H. P., 3500 r.p.m. General Electric. Can be furnished for D. C. 110 or 220 v. and A. C. 110 or 220 v. 60 cy. two or three phase. Two ring oiled sleeve bearings and ball thrust collar (only points of friction). Fused knife switch for wall mounting, with hand starter for A. C. or rheostat for D. C.

***Capacity:** Heavy duty six sweeper. Will maintain a vacuum of 70" to 75" while displacing 480 cu. ft. atmospheric air per minute.

Equipment: Extra.

Dimensions: Maximum floor space 100" x 40". Height for clearance 100".

Weight: Crated 3600 lbs.

Piping: Risers 2", 2½" and 3"; laterals 2½" to 5"; exhaust 5".

*These measurements made by the orifice method; water gauge.

W. & J. SLOANE, FIFTH AVE. & 47th STREET, NEW YORK

TELEPHONE: 7700 MURRAY HILL

WASHINGTON, D. C., 1412-1414 H. STREET, N. W.

"Invincible" VACUUM CLEANERS

"Invincible" STATIONARY PLANTS

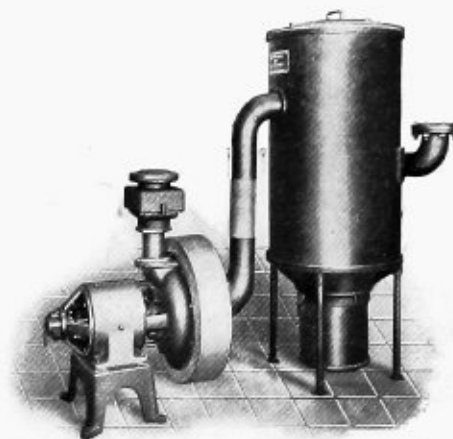
We build a machine to fit exactly the needs of any building. Our stationary plants all work on the same principle—a vacuum or suction created by centrifugal fans. The difference is simply one of power and capacity, and the increased size and weight which more power necessitates.

Our engineers will co-operate with anyone contemplating the purchase of a vacuum cleaning machine, giving advice based on experience in equipping all kinds of buildings.

Fans: The fans are of aluminum and are mounted directly upon one end of the motor shaft. Only two ring oiled bearings are used to support the moving element which consists of fans and revolving part of motor. This reduces wearing parts to a minimum and gives the maximum of simplicity and durability.

Dust Collector: "Invincible" combined centrifugal and screen type. Consists of heavy sheet steel shell, welded, with cast iron top and base. Tank mounted on three legs so that it can be made to stand level without any trouble.

Separator tank and exhauster are shipped as separate units; connected by rubber coupling so they can easily be aligned and set.



Typical Four Sweeper Plant.
(Nos. 905, 907 and 911)

SPECIFICATIONS "Invincible" FOUR-SWEEPER STATIONARY PLANTS

No. 905

Exhauster:—"Invincible" two-stage turbo fan (aluminum). Fan cases (soft gray iron castings) bolted to motor frame.

Motor:—5 H. P., 3500 rpm. General Electric or Century Electric. Can be furnished for D. C. 110 or 220 v. and A. C. 110 or 220 v., 60 cy., single, two or three phase. Two ring oiled sleeve bearings and ball thrust collar (only points of friction). Fused knife switch for wall mounting; starting rheostat also for D. C.

***Capacity:**—Light duty four sweeper. Will maintain a vacuum at machine of 50"-52" while displacing 260 cu. ft. atmospheric air per minute.

Equipment:—Extra.

Dimensions:—Maximum floor space 85"x40". Height for clearance 100".

Weight:—Crated, 1800 lbs.

Piping:—Risers 2", 2½" and 3"; laterals 2½" to 5"; exhaust 5".

No. 907

Exhauster:—"Invincible" three-stage turbo fan (aluminum). Fan cases (soft gray iron castings) bolted to motor frame.

Motor:—7½ H. P., 3500 rpm. General Electric or Century Electric. Can be furnished for D. C. 110 or 220 v. and A. C. 110 or 220 v., 60 cy., single, two or three phase. Two ring oiled sleeve bearings and ball thrust collar (only points of friction). Fused knife switch for wall mounting, with hand starter for A. C. or rheostat for D. C.

***Capacity:**—Medium duty four sweeper. Will maintain a vacuum at machine of 64"-66" while displacing 320 cu. ft. atmospheric air per minute.

Equipment:—Extra.

Dimensions:—Maximum floor space 100"x40". Height for clearance, 100".

Weight:—Crated, 2200 lbs.

Piping:—Risers 2", 2½" and 3"; laterals, 2½" to 5"; exhaust 5".

No. 911

Exhauster:—"Invincible" three-stage turbo fan (aluminum). Fan cases (soft gray iron castings) bolted to motor frame.

Motor:—10 H. P., 3500 rpm. General Electric. Can be furnished for D. C. 110 or 220 v. and A. C. 110 or 220 v., 60 cy., two or three phase. Two ring oiled sleeve bearings and ball thrust collar (only point of friction). Fused knife switch for wall mounting, with hand starter for A. C. or rheostat for D. C.

***Capacity:**—Heavy duty four sweeper. Will maintain a vacuum at machine of 80"-84" while displacing 350 cu. ft. atmospheric air per minute.

Equipment:—Extra.

Dimensions:—Maximum floor space 100"x40". Height for clearance, 100".

Weight:—Crated, 2500 lbs.

Piping:—Risers 2", 2½" and 3"; laterals, 2½" to 5"; exhaust, 5".

*These measurements made by orifice method; water gauge.

W. & J. SLOANE, FIFTH AVE. & 47th STREET, NEW YORK

TELEPHONE: 7700 MURRAY HILL

WASHINGTON, D. C., 1412-1414 H. STREET, N. W.

"Invincible" VACUUM CLEANERS

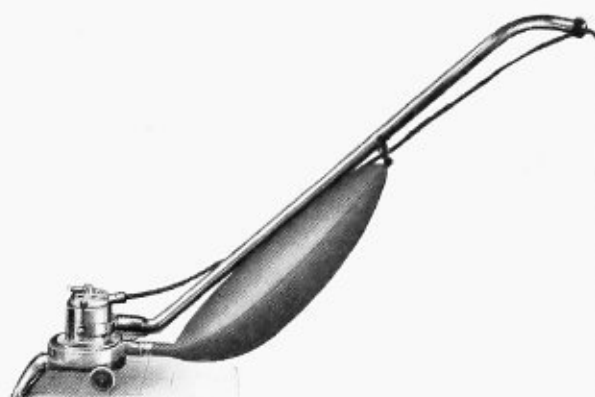
SPECIFICATIONS—BABY "Invincible"

Exhauster: Consists of single, cast aluminum fan carefully balanced and attached directly to the motor shaft; produces a suction of from 8½" to 9" and will handle a maximum quantity of 50 cu. ft. atmospheric air per minute.

Motor: 1/12 H. P., commutator type, mounted vertically which will operate on either alternating or direct current, provided frequency of A. C. is not higher than 60 cycles. For 110 volt circuits only.

Dust Bag: Exposed type of specially woven commercial satin which will not leak dust. Suspended from handle; spring clip at large end of bag, this clip having hook which engages in eyelet on handle; small end of bag fastened to exhauster by notched slip ring. Can be taken off and emptied in a very few seconds.

General: Machine is mounted upon two rubber-tired, ball-bearing wheels and runs very easily. Handle yoke swings up and down on two pins set in motor frame so that a long stroke can be taken without tilting the cleaning nozzle and handle automatically adjusts itself to the height of the operator. Handle is also equipped with a swivel elbow so that by a slight turn of the wrist the cleaning nozzle can be swung sharply either to the left or right. This is a distinct advantage in cleaning places which would ordinarily be inaccessible. Handle can be detached and used as a cleaning rod in conjunction with the hose and cleaning nozzle, which is also detachable, and fits swivel joint on straight end of handle. When it is desired to clean draperies, upholstery, etc., requiring the use of a hand renovator or brush, the cleaning nozzle is removed and in its place there is put the end of hose having the coupling attached to it. The hand renovator or brush to use is then placed in the other end of the hose. Another advantage of the Baby "Invincible" is that it can be used also for blowing purposes. This is very convenient for blowing dirt out of radiators and other places hard to reach. The dust bag is taken off and the hose coupling inserted in the exhaust opening to which the dust bag is ordinarily attached. One end of the hose is placed over the coupling and in the other end there is inserted the tool which is to be used.



Baby "Invincible"

Price, with hose and coupling . . . \$32.50



Cleaning tool for carpets—used on machine or floor rod—\$2



Brush attachment for walls, floors, etc.—\$2.25



Blowing tool for radiators and inaccessible places—also used to aerate pillows, mattresses, etc.—\$.75



Furniture brush for books, furniture, etc.—\$2.75



Felt attachment for hardwood floors, etc.—\$2.25



Upholstery tool for cleaning upholstery, draperies, etc.—\$1.35

THE "Invincible" Tools

See descriptions and prices above.

Equipment: The price of \$32.50 includes only 25 ft. of electric cord with attachment plugs, 10 ft. of 1¼" covered suction hose and one hose coupling. Most of our standard 1¼" tools can be used with this machine. Several of these, especially suitable for use with this machine, and the prices thereof are set forth elsewhere on this page.

Weight: Net, 10 lbs.; packed, 40 lbs.

The Baby "Invincible" is the final word in the small, convenient, low-priced cleaner. Ideal for small homes. It is light, compact, but skilfully designed and well built. It is the result of this company's many years experience in the manufacture of vacuum cleaners and is truly an "Invincible"—the world's standard.

W. & J. SLOANE, FIFTH AVE. & 47th STREET, NEW YORK

TELEPHONE: 7700 MURRAY HILL

WASHINGTON, D. C., 1412-1414 H. STREET, N. W.

"Invincible" VACUUM CLEANERS

SPECIFICATIONS FOR THE "Invincible" HANDY



"Invincible" Handy

The ideal machine for small homes.

Price, without equipment, \$35.00.

Exhauster:—Consists of a single turbine fan, producing a suction of 8½" to 9", and handling a maximum of 50 cubic feet of air per minute.

Motor:—One-twelfth horsepower Fort Wayne commutator type motor operating on either alternating current or direct current. The fan is a single piece aluminum casting and is mounted directly on the motor shaft.

Dust Bag:—Exposed type dust bag made of toga satin, attached to handle by spring clamp and to the exhaust opening of the machine by a coil spring attachment. Machine weighs but ten pounds and is easily portable. It is equipped with 25 ft. of flexible cord, having a Cutler-Hammer feed-through switch and a General Electric swivel attachment plug.

Tools:—No tools are included in the price of \$35.00, but when desired there will be furnished for \$8.00 extra, the following equipment:

One hose attachment, 1-8-ft. section 1¼" covered suction hose, 1-3" drapery and upholstery tool and 1 furniture or library brush.

The "Invincible" Handy is the final word in the small, convenient, low-priced vacuum cleaner.

While small and compact it is an "Invincible" Cleaner in every sense of the word. It is as light as efficiency and durability permit.

It is the result of many years' experience by this company, the first to manufacture a really efficient, portable cleaner.

Our turbine fan gives greater displacement and higher vacuum than any other cleaning machine of the same weight and power.

The flexible swivel handle makes it easy to reach all corners and to clean around furniture.

The "Invincible" Handy is by far the best of all machines of like size and price.

"Invincible" VACUUM CLEANERS

SPECIFICATIONS FOR "Invincible" HEAVY DUTY TRUCKS



Typical "Invincible" Heavy Duty Truck (Nos. 405-T, 410-T and 415-T).

Our truck machines are designed to meet the great needs of factories, office and public buildings, hotels, churches, theatres, etc., where an installed plant is not desired or practicable and where the cleaning work is so great that more power than any smaller portable cleaner can furnish is demanded for the quickest and most economical service. The "Invincible," having the great advantage of the centrifugal fan principle, has more cleaning power for the weight of the machine than any other vacuum cleaner. Our truck machines fit perfectly the needs of many big buildings. They are simple, powerful, quiet-running and durable and are daily proving themselves big practical economies.

"Invincible" truck machines are built in three sizes as noted below and in design and capacity are practically identical with standard single sweeper stationary plants No. 405, 410 and 415. The dust collector and motor are mounted upon a steel bar frame supported by four rubber tired wheels with a hinged tongue attached to the front axle by means of which the outfit can easily be pulled about. These trucks are especially suitable for office buildings and hotels, also department stores where elevator service is available for taking them from one floor to another.

These trucks are not only the best vacuum cleaners obtainable but because of the perfect separation of dust from the air, the air as it comes from the exhaust can be used for blowing purposes. This feature has proven a very attractive and valuable one to users of these trucks.

Dust Collector: Standard "Invincible" dry separator tank with heavy duty dust receptacle, easily removable for emptying and cleaning. Shell of tank is heavy sheet steel; top, cast aluminum and base cast iron.

Equipment: The following standard equipment is furnished with trucks Nos. 405-T, 410-T and 415-T:—50 ft. flexible electric cable with attachment plug; 25 ft. of 1½" wire reinforced canvas covered suction hose; 1-12" carpet renovator; 1-10" narrow slot swivel type carpet renovator for thorough cleaning; 1½" curved handle with hose swivel and tool swivel; 1-12" brush for floor or walls; one general utility brush; 1-3" renovator for draperies and upholstery; and 1 blower connection for exhaust.

No. 405-T

Exhauster:—"Invincible" two-stage fan (aluminum) mounted directly upon motor shaft. Fan cases (cast aluminum) bolted to motor frame.

Motor:—½ h. p., 3500 r. p. m. Westinghouse or General Electric. Can be furnished for D. C. 110 or 220 volts and A. C. 110 or 220 volts, 60 cycles, single phase. Two ring-oiled bearings (only points of friction). Snap switch on motor frame.

***Capacity:**—Will maintain a vacuum of 18" at machine while displacing 50 cu. ft. atmospheric air per minute. Maximum suction, 26"; maximum displacement, 110 cu. ft. per minute.

Dimensions:—(Overall) Width 18"; length 38"; height 30".

Weight:—Net, 200 pounds; crated, 290 pounds.

Price:—With standard equipment, \$225.

No. 410-T

Exhauster:—"Invincible" three-stage fan (aluminum) mounted directly upon motor shaft. Fan cases (cast aluminum) bolted to motor frame.

Motor:—1 h. p., 3500 r. p. m. General Electric or Century Electric. Can be furnished for D. C. 110 or 220 volts and A. C. 110 or 220 volts, 60 cycles, single phase. Two ring-oiled bearings (only points of friction). Snap switch on motor frame.

***Capacity:**—Will maintain a vacuum of 26" at machine while displacing 60 cu. ft. atmospheric air per minute. Maximum suction, 33"; maximum displacement, 115 cu. ft. per minute.

Dimensions:—(Overall) Width 18"; length 47"; height 30".

Weight:—Net 290 pounds; crated, 400 pounds.

Price:—With standard equipment, \$300.

No. 415-T

Exhauster:—"Invincible" four-stage fan (aluminum) mounted directly upon motor shaft. Fan cases (cast aluminum) bolted to motor frame.

Motor:—1½ h. p., A. C.; 1¼ h. p. D. C., 3500 r. p. m. Westinghouse, General Electric or Century. Can be furnished for D. C. 110 or 220 volts and A. C. 110 or 220 volts, 60 cycles, single phase. Two ring-oiled bearings (only points of friction). Snap switch on motor frame. Starting rheostat also with D. C.

***Capacity:**—Will maintain a vacuum of 35" at machine while displacing 60 cu. ft. of atmospheric air per minute. Maximum suction, 40"; maximum displacement, 130 cu. ft. per minute.

Dimensions:—(Overall)—Width, 18"; length, 50"; height, 30".

Weight:—Net, 315 pounds; crated, 425 pounds.

Price:—With standard equipment, \$350.

*These measurements made by orifice method; water gauge.

W. & J. SLOANE, FIFTH AVE. & 47th STREET, NEW YORK

TELEPHONE: 7700 MURRAY HILL

WASHINGTON, D. C., 1412-1414 H. STREET, N. W.

CARNEGIE LIBRARY OF PITTSBURGH



3 1812 04052 7922